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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/915,554	07/27/2001	Tae-jin Lee	Q63310	7393

7590 05/19/2005

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2100 Pennsylvania Avenue, NW  
Washington, DC 20037-3213

EXAMINER
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LEE, JOHN J

ART UNIT	PAPER NUMBER
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2684

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/915,554	<b>Applicant(s)</b> LEE ET AL.	
	<b>Examiner</b> JOHN J LEE	<b>Art Unit</b> 2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>5/14/04</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Response to Arguments/Amendment*

1. Applicant's arguments received on July 22, 2004 have been carefully considered but they are not persuasive because the teaching of all the cited reference reads on all the rejected claims as set forth in the pervious rejection. Therefore, the finality of this Office Action is deemed proper.

Contrary to the assertions at pages 7 - 11 of the Arguments, claims 1, 8, and 15 are not patentable.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the reference (Vook et al. US Patent number 5,583,866) teaches a radio communication system having microcell and macrocell (hierarchical system) system for delivering broadcast packets/signals between control node and communication units in a spread spectrum radio

communication system such that a local area network (LAN), ad-hoc system, and Balasuriya (US Patent number 6,411,815) that teaches hierarchical communication system such that ad-hoc system having communicating and providing the arbitrating service between arbitrator (access node) and communication unit. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Vook as taught by Balasuriya, provide the motivation to achieve enhancing communication reliability and more efficient communication in ad-hoc communication system.

Re claims 1, 8, and 15: Applicant argues that the combination of Vook and Balasuriya do not teach the claimed invention “a controller for determining a priority of the at least one slave device considering the request priority, determining a frequency of communication according to the priority of the at least one slave device and controlling the communication with the at least one slave device”. However, The Examiner respectfully disagrees with Applicant’s assertion that the Vook and Balasuriya do not teach the claimed invention. Contrary to Applicant’s assertion, the Examiner is of the opinion that Balasuriya teaches received priority service request from a communication unit and a secondary arbitrator (controller) determines the priority of the communication unit (slave device) considering the requested priority, and also determines whether resources to support a requested quality of service of later service request is available and then if the resources not available, the secondary arbitrator determines that the service request should be denied and notifies the requesting communication unit (slave device). Otherwise, the secondary arbitrator grants the priority service request and controls the communication with the communication unit (see

Fig. 3 and column 6, lines 5 – column 7, lines 15), regarding the claimed limitation. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Vook system as taught by Balasuriya, provide the motivation to achieve enhancing communication reliability and more efficient communication in ad-hoc communication system.

Applicant's attention is directed to the rejection below for the reasons as to why this limitation is not patentable.

#### ***Claim Objections***

2. **Claim 2 is objected** to because of the following informalities: the limitation “the the frequency” in claim 2 should be changed to “the frequency”. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1 – 18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Vook et al. (US patent number 5,583,866) in view of Balasuriya (US Patent number 6,411,815).

Regarding **claims 1 and 8**, Vook discloses that a wireless communication apparatus (Fig. 1) for performing a wireless communication (Fig. 1 and column 3, lines

53 – column 4, lines 9). Vook teaches that a transceiving unit (14 in Fig. 1) for receiving and transmitting data externally (abstract and Fig. 1), the transceiving unit (14 in Fig. 1) maintaining a link to at least one slave device (12 in Fig. 1) (column 4, lines 10 – 45 and Fig. 1) and providing a requested priority to the at least one slave device (column 14, lines 13 – column 15, lines 4 and Fig. Fig. 10, where teaches master device provides determining high priority and low priority for each slave devices), when the wireless communication apparatus is operated as a master (Fig. 1 and abstract). Vook teaches that a controller (14 in Fig. 1) for determining a priority of the at least one slave device considering the requested priority (column 14, lines 60 – column 15, lines 4, Fig. Fig. 10, and column 15, lines 66 – column 16, lines 36, where teaches master device determines priority of the slave device (source user device) as the slave device wishes to transmit than other devices), determining a frequency of communication according to the priority of the at least one slave device (column 7, lines 34 – column 8, lines 30 and Fig. 3, where teaches each master station (access point) has available frequencies and device can tune to selected channel frequency) and controlling the communication with the at least one slave device (column 7, lines 34 – column 8, lines 30 and Fig. 3).

Vook does not specifically disclose the limitation “receiving a requested priority from the at least one slave device”. However, Balasuriya discloses the limitation “receiving a requested priority from the at least one slave device” (column 6, lines 5 – column 7, lines 2 and Fig. 1, where teaches the master device (secondary arbitrator) receives a service, a priority level of the service request, from slave device (communication unit)). It would have been obvious to one having ordinary skill in the art

at the time the invention was made to modify the Vook system as taught by Balasuriya. The motivation do so would be to achieve an efficient priority transmission service and enhancing communication reliability in wireless communication system.

Regarding **claims 2 and 14**, Vook discloses that the frequency of communication increases as the priority increases (column 16, lines 12 – 64 and Fig. 6, 8).

Regarding **claims 3, 11, and 16**, Vook does not specifically disclose the limitation “the controller assigns a priority lower than the requested priority when the requested priority is not allowable to the at least one slave device”. However, Balasuriya discloses the limitation “the controller assigns a priority lower than the requested priority when the requested priority is not allowable to the at least one slave device” (column 6, lines 55 – column 7, lines 2 and Fig. 1, where teaches the master device (secondary arbitrator) determines that the service request should be denied, when the priority level of later service request is lower than the priority level of the service request). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Vook system as taught by Balasuriya. Doing so would enhance controlling priority adaptability in wireless communication system.

Regarding **claim 4**, Vook discloses that the controller communicates with the at least one slave device in accordance with the frequency of communication (column 7, lines 34 – column 8, lines 30 and Fig. 3).

Regarding **claims 5, 13, and 18**, Vook discloses that the controller subtracts one time from the frequency of communication after each communication between the controller and the at least one slave device (column 16, lines 37 – 64 and Fig. 8).

Regarding **claim 6**, Vook discloses that a memory for storing the frequency of communication of the at least one slave device (column 9, lines 9 – 19 and Fig. 3).

Regarding **claim 7**, Vook discloses that the controller updates the frequency of communication stored in the memory after communicating with the at least one slave device (column 10, lines 48 – column 11, lines 15 and Fig. 3).

Regarding **claim 9**, Vook and Balasuriya disclose all the limitation, as discussed in claims 1 and 8.

Regarding **claim 10**, Vook discloses that the at least one slave device transmits the requested priority according to the amount of data to be transmitted to the master device (Fig. 5 and column 12, lines 36 – column 13, lines 18).

Regarding **claim 12**, Vook and Balasuriya disclose all the limitation, as discussed in claims 1 and 4.

Regarding **claim 15**, Vook and Balasuriya disclose all the limitation, as discussed in claims 1 and 8.

Regarding **claim 17**, Vook and Balasuriya disclose all the limitation, as discussed in claims 1 and 8.

**5 THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within



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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

*Conclusion*

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

or faxed (703) 308-9051, (for formal communications intended for entry)

Or: (703) 308-6606 (for informal or draft communications, please label "PROPOSED" or "DRAFT").


Hand-delivered responses should be brought to USPTO Headquarters,  
Alexandria, VA.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John J. Lee** whose telephone number is **(571) 272-7880**. He can normally be reached Monday-Thursday and alternate Fridays from 8:30am-5:00 pm. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, **Nay Aung Maung**, can be reached on **(571) 272-7882**. Any inquiry of a general nature or

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relating to the status of this application should be directed to the Group receptionist  
whose telephone number is (703) 305-4700.

J.L  
May 10, 2005

  
NAY MAUNG  
SUPERVISORY PATENT EXAMINER

John J Lee